Amendment to the Claims

1. (Currently Amended) In a method of assembling a lamp including the steps of:

forming a bulbous light emitting chamber intermediate tubular end portions from a lamp burner envelope;

sealing each of the tubular end portions with a respective heat source disposed proximate the bulbous light emitting chamber; and

coating at least a portion of the surface of the bulbous light emitting chamber,

the improvement comprising the step of ~~protecting~~ shielding the coated surface of the bulbous light emitting chamber from the heat source, whereby the step of coating is performed before the step of sealing without resulting in degradation to the performance of the coating.

2. (Original) The method of Claim 1 wherein the burner envelope when completed as a lamp burner includes elements which would be damaged by baking in an oxygen containing atmosphere at temperatures greater than a certain temperature, the method further comprising the step of baking the coated burner envelope in an oxygen containing atmosphere at a temperature greater than the certain temperature.

3. (Original) The method of Claim 2 where the baking temperature is greater than about 400° C.

4. (Original) The method of Claim 2 wherein the step of baking the coated burner envelope comprises the steps of baking the burner envelope at a first baking temperature for a first baking period followed by the step of raising the baking temperature and baking the burner envelope for another period of time.

5. (Original) The method of Claim 1 further comprising the step of baking the coated burner envelope in an essentially oxygen free atmosphere.

6. (Original) The method of Claim 1 wherein portions of the lamp burner envelope are coated with a material which will be damaged if exposed to temperatures above a certain temperature and wherein the sealing is performed by exposing one or more uncoated portions of the burner envelope to temperatures above the certain temperature, the method further comprising the step of preventing the exposure of the coated portions of the burner envelope

adjacent the uncoated portions exposed to such temperatures from temperatures above the certain temperature.

7. (Original) The method of Claim 1 further comprising the step of aligning a filament in an IRR coated burner envelope including the step of determining the optimum position of the filament relative to the burner envelope by measuring the power applied to the filament to maintain a constant temperature of the filament.

8. (Original) The method of Claim 1 wherein the burner envelope is formed from one or more of the materials from the group consisting of glass, quartz glass, and ceramics.

9. (Original) The method of Claim 1 wherein the step of coating portions of the surface of the burner envelope includes the step of masking selected portions of the surface of the burner envelope so that the selected portions remain uncoated after the step of coating portions of the surface of the burner envelope.

10. (Previously Presented) The method of Claim 1 further comprising the step of cutting a generally tubular section of light transmitting material to form one or more lamp burner envelopes wherein the step of coating is performed before the step of cutting the burner envelope.

11. (Currently Amended) A method of assembling a lamp comprising the ordered steps of:

a. providing a burner envelope of light-transmitting material forming a bulbous light emitting chamber intermediate tubular end portions;

b. coating the exterior surface of the burner envelope;

c. positioning one or more electrical leads so that each of the leads provides an electrical connection from internal of the light emitting chamber to external of the envelope;

d. ~~protecting~~ shielding the coated surfaces from at least one heat source disposed proximate the bulbous light emitting chamber; and

d. sealing the burner envelope by heating each of the tubular end portions with a respective one of said heat sources to hermetically seal the burner envelope to the leads to thereby seal the bulbous light emitting chamber intermediate tubular end portions.

12-29. (Cancelled)

30. (Currently Amended) A method of depositing a layer of material on the exterior surface of a lamp burner envelope having a bulbous light emitting chamber intermediate tubular end portions which when completed as a lamp burner includes elements which would be damaged by baking at temperatures greater than a certain temperature, the method comprising the ordered steps of:

(a) depositing the layer of material;

(b) baking the burner envelope at temperatures greater than the certain temperature; and

(c) ~~protecting~~ shielding the deposited layer of material from at least one heat source disposed proximate the bulbous light emitting chamber; and

(d) sealing portions of said elements into said lamp burner envelope by heating each of the tubular end portions with a respective one of said heat sources to hermetically seal the burner envelope, whereby the protecting the deposited layer allows depositing the layer before the sealing, which allows the baking of the deposited layer of material without the presence of said elements.

31. (Original) The method of Claim 30 wherein the certain temperature is about 400°C.

32. (Original) The method of Claim 30 wherein the certain temperature is about 600°C.

33. (Original) The method of Claim 30 wherein the certain temperature is about 1200°C.

34. (Original) The method of Claim 30 comprising the steps of baking the burner envelope at a first baking temperature for a first baking period followed by the step of raising the baking temperature and baking for another period of time.

35. (Original) The method of Claim 34 wherein the step of raising the baking temperature is repeated one of more times.

36. (Original) The method of Claim 30 wherein the material is deposited in a sputter deposition process and the burner envelope is baked to oxidize the deposited material to form an optical interference coating.

37. (Currently Amended) In a process of hermetically sealing a lamp burner envelope having a bulbous light emitting chamber and having portions coated with a material which will be damaged if exposed to temperatures greater than a certain temperature wherein the sealing is performed by exposing one or more uncoated portions of the burner envelope to temperatures greater than the certain temperature, the step of ~~preventing~~ shielding the exposure of the coated portions of the burner envelope to temperatures greater than the certain temperature.

38. (Currently Amended) The process of Claim 37 wherein the step of ~~preventing~~ shielding the exposure of the coated portions of the burner envelope includes the step of providing a heat reflective shield.

39. (Previously Presented) In a method of manufacturing an IRR coated lamp burner including the steps of (a) coating portions of the lamp burner envelope with a first coating which will be damaged if exposed to temperatures greater than a certain temperature and (b) sealing the envelope to form a bulbous light emitting chamber by exposing one or more uncoated end portions of the burner envelope to temperatures greater than the certain temperature, the step of coating the first coated portions adjacent the uncoated portions to be exposed to temperatures

greater than the certain temperature with a second coating which both (i) shields the first coating from exposure to temperatures greater than the certain temperature during the sealing process and (ii) reduces the loss of infrared radiation through the end portions during operation of the lamp.

40-45. (Cancelled)

46. (Currently Amended) A method of making a lamp burner comprising a bulbous light emitting chamber intermediate sealed tubular end portions, said method comprising the steps of:

forming at least one bulbous portion in an elongate tubular envelope;

coating at least a portion of the exterior surface of said bulbous portion;

cutting said elongate tubular envelope to form at least one bulbous light emitting chamber intermediate tubular end portions wherein the step of coating is performed before the step of cutting;

~~protecting~~ shielding said coated surface from at least one heat source disposed proximate to the bulbous light emitting chamber;

hermetically sealing each of the tubular end portions using at least one respective heat source, whereby the step of protecting the coated surface allows the step of coating to occur before the step of sealing without damage to the coated surface, whereby the step of coating may then also be performed before the step of cutting, thereby increasing the rate of lamp burner production.

47. (Previously Presented) The method of Claim 46 wherein the elongate tubular envelope comprises light transmitting material.

48. (Previously Presented) The method of Claim 47 wherein the step of coating includes the step of baking the coated surface.

49. (Withdrawn) A coated lamp burner envelope comprising a generally tubular unsealed section of light transmitting material having one or more materials deposited on at least a portion of the exterior surface thereof to form a coating.

50. (Withdrawn) A coated lamp burner envelope comprising (i) a generally tubular section of light transmitting material suitable for forming the light emitting chamber of a lamp burner by sealing the end portions thereof, and (ii) a first coating formed on at least a portion of the exterior surface of said section, whereby the end portions of said section are not sealed.

51. (Withdrawn) The coated lamp burner envelope of Claim 50 further comprising a second coating formed on one or more selected portions of the exterior surface of said section.

52. (Withdrawn) A sealed lamp burner having a first coating formed on at least a portion of the exterior surface thereof and a second coating formed on the portions of the surface of said burner adjacent the end portions of the burner, said second coating being suitable for preventing the exposure of the first coating to temperatures greater than a certain temperature when selected portions of the end portions of said burner are exposed to temperatures greater than the certain temperature.

53. (Withdrawn) A section of light transmitting material suitable for forming a lamp burner, said section having a coating formed on at least a portion of the exterior surface thereof, said coating comprising (i) one or more oxidized and unoxidized materials and (ii) sufficient unbonded oxygen dissolved therein so that the unbonded oxygen will oxidize some or all of the unoxidized material when exposed to high temperatures.

54. (Withdrawn) A generally tubular section of light transmitting material suitable for forming a plurality of lamp burner envelopes by transversely cutting the section at selected locations along the length thereof, said section having a coating formed on at least a portion of the exterior surface of said section, whereby the coating is formed before the section is cut.

55. (Withdrawn) In an apparatus for uniformly depositing a layer of one or more materials on an array of elongated substrates including a carrier for carrying the array past one or more sources of the material to be deposited and a means for rotating each substrate about its longitudinal axis, the improvement wherein the axial rotation means comprises one or more elongated rods each having one or more substrates supported thereon for rotating the substrates supported thereon about the axis formed by the rod.

56. (Withdrawn) The apparatus of Claim 55 wherein the carrier comprises a cylindrical drum which is rotatable about its longitudinal axis, said drum carrying a plurality of axial rotation means spaced apart about the circumference of the drum.

57. (Withdrawn) The apparatus of Claim 55 wherein the rod is frictionally engaged with the internal surface each substrate supported thereon.

58. (Withdrawn) The apparatus of Claim 55 wherein the carrier comprises a flat surface which is linearly transported past the sources of the material to be deposited.

59. (Withdrawn) In an apparatus for determining the optimum position of the filament relative to the lamp burner envelope of a halogen lamp, said apparatus including a means for positioning the filament relative to the lamp burner envelope, the improvement wherein the apparatus further comprises a means for measuring the electrical resistance of the filament.

60. (Withdrawn) In an apparatus for determining the optimum position of the filament relative to the lamp burner envelope of a halogen lamp, said apparatus including a means for positioning the filament relative to the lamp burner envelope, the improvement wherein the apparatus further comprises a means for measuring the temperature of the filament.

61. (Withdrawn) An apparatus for aligning the filament relative to the lamp burner envelope in an IRR coated halogen lamp comprising:

a. means for positioning the filament relative to the burner envelope;

b. a source of electrical power operably connected to the filament;

c. a temperature measuring device for measuring the temperature of the filament; and

d. an electrical power measuring device for measuring the electrical power applied to the filament.

62. (Previously Presented) The method of claim 1, wherein said bulbous light emitting chamber is substantially elliptical.

63. (Previously Presented) A method of assembling a lamp comprising the steps of:

a. providing a burner envelope of light-transmitting material forming an internal light emitting chamber;

b. coating the exterior surface of the burner envelope;

c. positioning a filament within the coated burner envelope;

d. positioning one or more electrical leads so that each of the leads provides an electrical connection from the filament internal of the light emitting chamber to external of the envelope;

e. applying power to the filament via the electrical leads;

f. repositioning the filament to a position requiring the lowest applied power to maintain the filament at a constant temperature; and

g. sealing the burner envelope to hermetically seal the burner envelope to the leads to thereby seal the light emitting chamber and fix the position of the filament.

64. (Previously Presented) In a process of hermetically sealing each tubular end portion of a double ended lamp burner envelope having a substantially elliptical bulbous light emitting chamber and having portions coated with an IR reflective material which will be damaged if exposed to temperatures greater than a certain temperature, wherein the chamber is sealed by pinch sealing each end portion during which pinch sealing process the end portions are exposed to temperatures greater than the certain temperature, the step of shielding portions of the IR reflective coating to thereby prevent exposure of the coated portions of the burner envelope to temperatures greater than the certain temperature.

65. (Previously Presented) A method of making a lamp comprising the steps of:

coating a lamp burner envelope comprising a bulbous light emitting chamber intermediate tubular end portions;

positioning one or more electrical leads in the tubular end portions of the coated lamp burner envelope;

pinch sealing one of the tubular end portions while shielding the portion of the bulbous chamber adjacent the tubular end portion to thereby prevent exposure of the coating thereon from temperatures that would damage the coating.